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State of Utah
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Folder #2 and FA notebook update TA...

TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist SLF

RE: Revised Calculations for Crandall Canyon Flumes, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032 95B, Folder #1, Carbon County, Utah

Summary:

The operator has re-submitted the Crandall Creek flow data for 1988 through 1991. These data were incorrectly interpreted in earlier submittals. Data is missing from the Lower Flume from 9/03/1988 through 10/03/88. Data is missing from the Upper Flume from April 3, 1990 through May 1, 1990 and, June 8, 1990 through September 4, 1990 with the exception of the following dates; July 3; August 6; and August 7. Data missing during 1990 were due to problems with the recording clock and data missing for the winter months were due to freezing.

Analysis:

The operator has re-calculated the flow volumes based on base flow measurements obtained at the beginning and end of the recording period. The flow chart for the Upper and Lower Flume from 7/1/89 to 7/31/89 was analyzed. The operators dates and elevation estimates differed from the Divisions. The greatest peak height for the upper flume during this period was estimated by the Division to be 0.68 feet and to have occurred on July 22nd, while the operator determined the peak to occur on July 24th to a height of 0.64 feet. The lower flume appeared to reach 1.1 feet compared to 0.61 estimated by the operator. A review of precipitation data for the Crandall Canyon Mine did not favor either date. Precipitation occurred at 0.3 to 0.4 inches/day from 7/12 through 7/24. The Division has determined the data values from a copy of the original data chart. A review of the original data charts may be necessary to determine accuracy of the values presented.

Findings:

The applicant has adjusted the values determined to be inadequately presented earlier. The values can only be verified by review of the original recording forms.

Recommendation:

It is recommended the Division incorporate the presented values and coordinate further analysis through review of the original charts with the operator. The operator incorrectly identified the Appendix to replace the presented values. The plan should be updated in the correct Appendix, which is Appendix 7-23.

The following Section in the LBA TA Document H:LBA~~TA~~S.GEN should be updated as identified by Redline and Strikeout fonts.

Section:
R645-301-724.200 Baseline Surface Water Information

Paragraph 6:

Genwal has maintained two 36-inch Parshall flumes in Crandall Creek, just above and below the surface facilities, since 1988. For the period from May 1988 to October 1992 reported in Appendix 7-23, flows through the lower flume are ~~consistently~~ lower than flows from the upper flume for a majority of the occurrences. In 1992 a greater number of days showed flows increasing at the downstream station during the month of June. The lower flume was reported to be intermittently dry in May 1992 while the upper flume recorded 0.82 cfs to 1.12 cfs: the upper flume froze but never indicated the stream to be dry during the time period covered. Maximum flow recorded at the upper flume was 19.64 ~~26.79~~ cfs on ~~May 4~~ June 5, 1988 but the maximum at the lower flume was 12.19~~15.35~~ cfs on May 13, 1988 (~~21.01~~14.13 cfs at upper flume). Genwal has determined that the cause of the discrepancy between flows recorded at the two flumes was that the floats were turning the drums of the Steven recorders in opposite directions. Genwal has ~~is~~ reassessed~~ing~~ the data for this period ~~and has committed to submit correct flow data by December 1, 1994~~.